

Purchasing an Encyclopedia

> 12 Points to Consider

Third edition

Reviews by the Editorial Board of *Reference Books Bulletin* Revised Introduction by Sandy Whiteley

> BOOKLIST American Library Association 1989

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Introduction

An early, so-called encyclopedic work, Sir Thomas Elyot's Boke of the Gouvernour (1531), was described as rendering "superfluous the need to consult any other books." Today's encyclopedia publishers set themselves more realistic goals. Collier's Encyclopedia, for instance, attempts to present a "scholarly, systematic, continuously revised summary of the knowledge that is most significant to mankind," while Academic American Encyclopedia states as its aim "to make accessible to a particular audience definitive information on the broadest possible range of subjects." World Book endeavors to present "information from the vast reservoir of knowledge in the most accessible and usable form." "To provide the inquiring mind with accurate information told in an interesting style, and thus lead into broader fields of knowledge" is the goal of Compton's Encyclopedia. And according to Funk & Wagnalls New Encyclopedia, the basic task of an encyclopedia is "to mirror fully and fairly the state of the world for its audience."

In addition to answering factual questions, the contemporary encyclopedia provides an introduction to and overview of many topics, usually accompanied by reading lists that will lead to further information. While all sets use illustrations to clarify the text, some encyclopedias particularly stress the visual. Academic American Encyclopedia and The New Book of Knowledge are two outstanding examples of this. Some sets are designed specifically to meet curriculum-related needs of students: World Book, for instance. Some include practical information, such as the article explaining the gears on a 10-speed bike in Compton's, while other sets, such as The New Encyclopaedia Britannica, cover strictly academic material.

When choosing an encyclopedia, the most critical factor is selecting a set appropriate to the age of the potential users. Often families want to buy a set for an elementary school child that will take him or her through high school and college, and so they choose one of the adult sets, hoping the child will grow into it. By the time the child is ready to use the set, some of its content will already be outdated. Meanwhile, the child may become discouraged by trying to use a set that is written at too advanced a level. When buying an encyclopedia for an elementary-age child, it is best to select one written specifically for younger readers. The child will be more likely to use the set and develop the habit of using reference books. Since young children are not able to go to the public library on their own, families in which both parents work may especially appreciate having a set in the home.

Families with older children will also find an encyclopedia a worthwhile purchase. While high school students may be able to go to the library independently, they will be grateful for a set at home when they start an assignment at a time the library is closed. Finally, though it is often the presence of children in the home that motivates adults to purchase an encyclopedia, it is a useful resource for adults as well. In addition to helping parents answer their children's questions, a good encyclopedia will provide background information for other books the parents are reading or television programs they are watching, will help resolve informal debates with other adults, and will even help with puzzles and games. The adult who works at home will find an encyclopedia very useful.

But for both children and adults, encyclopedias serve more than just education- or work-related purposes. A good encyclopedia inevitably encourages browsing and can serve as recreational reading. Columnist Bob Greene reminisced in the March 5, 1986, *Chicago Tribune* about his use of an encyclopedia as a child: "On days when there was not much

to do, I would sometimes pick out a volume at random, and just go through it until I found a subject that appealed to me. Then I would read up on that subject until the end of the encyclopedia's entry—and then I would go on to another subject. And it wasn't boring. . . . It was as if the world was contained in those 26 volumes, and any time I felt like it I could jump headlong into that world and come out with something I never knew about before." He concludes by saying, "I still find myself using the encyclopedia."

The multivolume general encyclopedias on the market today can be identified as being written for the following age groups: (1) those intended for 7- through 14-year-old readers-Children's Britannica and The New Book of Knowledge; (2) those aimed at children about 11 through the teenage years—Compton's Encyclopedia, Merit Students Encyclopedia, New Standard Encyclopedia, and World Book Encyclopedia (the latter two with some articles or parts of articles written at the adult level); (3) relatively smaller sets appropriate both for teenagers and adults—Academic American Encyclopedia and Funk & Wagnalls New Encyclopedia; and (4) large, comprehensive sets for high school and college students and adults-Collier's Encyclopedia, The Encyclopedia Americana, and The New Encyclopaedia Britannica. All the sets for young people have some material that is useful for adults as well. In some cases, articles in a children's set may be a better introduction for adults to a very complicated topic than those in an adult encyclopedia. For instance, an adult with no science background may find the explanations of black holes or supernovas in a children's set easier to understand.

Points to Consider before Purchase

After narrowing down the field based on the appropriateness of the sets for the intended age group, there are 12 criteria

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Points to Consider before Purchase

After narrowing down the field based on the appropriateness of the sets for the intended age group, there are 12 criteria

that can be used in evaluating an encyclopedia. Each characteristic is briefly explained below. Prospective purchasers should visit their local public or school library and compare encyclopedias, looking up topics on which they are already knowledgeable to assess the relative strengths of the sets.

Authority. Authority derives from the credentials of contributors and the general reputation of the publisher. While distinguished contributors may be listed as the anthors of articles, the editors determine what information to include as well as the format in which it will appear. Sets differ in the extent to which they use outside experts to draft articles. New Standard Encyclopedia and Children's Britannica articles are written by staff and are thus unsigned. Many sets have long articles signed by outside authors and unsigned short articles, while World Book has authors' signatures at the ends of even the briefest articles. Potential purchasers of an encyclopedia can find the credentials of its contributors listed, usually in either the first or the last volume of the set. An examination of the lists of contributors to all these sets shows that some of them are dead or long-retired. For instance, one of the authors of Botany in one encyclopedia taught at Oberlin College from 1898 to 1933. A contributor of articles on the history of science to another set retired from Harvard in 1951.

Arrangement. All the encyclopedias reviewed here are arranged alphabetically, either word by word or letter by letter. (For example, a word-by-word arrangement is ice cream, ice hockey, iceboating, Iceland. A letter-by-letter arrangement is iceboating, ice cream, ice hockey, Iceland.) A word-by-word arrangement is easier for most children to use. It is helpful for younger readers if the alphabet is divided so that all of one letter (or all of a combination of letters like WXYZ) is in one volume.

To assist in finding related information, encyclopedias provide indexes, cross-references, and tables of contents and boxed summaries at the beginnings of long articles. A detailed index is particularly helpful in drawing together information that may be scattered throughout the set. Artists, for example, may have articles of their own but may also be discussed in broader articles on painting or sculpture. To test an encyclopedia's indexing and cross-referencing system, pick four or five topics and see how the various keys lead to related information. To compare ease of use, the same topics should be looked up in similar encyclopedias.

Subject Coverage. To determine appropriateness of subject coverage to one's own needs, consider the type and range of topics included in the encyclopedia and the relative space allotted to various subjects. Are "hot" topics and contemporary issues covered or only those items that have been proven by the passage of time to be part of our cultural heritage? Does the allocation of space to various subjects meet the purchaser's requirements? A purchaser interested in such practical topics as careers or nutrition or how-to-do-it information, for example, should not purchase a set that covers strictly academic topics. Encyclopedias for children will, of course, devote more attention to such topics as pets, hobbies, and sports than will adult encyclopedias.

Accuracy. Readers often take for granted that information in an encyclopedia is accurate, but outdated statistics and erroneous dates can be found. Generally, however, editors take special care to make articles as accurate as possible, and all copy goes through a lengthy checking procedure. Before investing in an encyclopedia, prospective buyers should inspect topics with which they are familiar to see if articles on them are accurate.

Objectivity. Space limitations in general encyclopedias make lengthy representation of all views on controversial topics an impossibility. Readers therefore depend on the editorial judgment of encyclopedia editors to present a balanced picture. Consumers should examine specific articles to see to what extent opposing doctrines are given fair

and balanced consideration. Encyclopedias are written to sell to the widest possible audience, and therefore most articles represent mainstream thinking. Users looking for articles that propound unorthodox views on health, for instance, will not find them in these sets. Readers should also be on the alert for the presence of racial and sexual biases. Attempts to counter racial bias in encyclopedias have included adding biographies and articles on minority history and eliminating denigrating language. Similar steps have been taken to eliminate sexual bias; however, it lingers in some sets. The reader should be wary of the stereotyping of women, overuse of the pronoun he, and single-gender characterizations of various vocations, for example, exclusively male airline pilots or female secretaries. Encyclopedias that have revised their texts on these topics may still be using older photographs that reflect stereotypes.

Recency. There are facts that do not "date." Much of the information on the humanities—art, music, philosophy—does not change dramatically over time. However, population statistics, election results, important scientific breakthroughs, and sports records are among the many topics on which out-of-date information is misleading. The fact that the encyclopedias reviewed here all undergo an annual revision does not mean that all facts are updated. All encyclopedia editors have a page budget that limits the number of pages they are able to change in any one revision, with most sets making changes on about 10 percent of the pages. Before investing in an encyclopedia, a would-be purchaser should check the currency of information on topics with which he or she is familiar.

Quality. Items that determine the quality of individual articles in an encyclopedia include many of the characteristics discussed under other headings here. Another factor, however, is the length of articles, which should vary with the importance and complexity of the subject. Encyclopedias differ in the degree to which they present information on

specific topics or subsume material on related topics into broad articles. The Encyclopedia Americana, for instance, tends to have articles on specific subjects. Collier's, on the other hand, has fewer, longer articles on broader topics. The New Encyclopaedia Britannica uses both approaches, with long articles on broad topics in the Macropaedia and shorter articles on narrower topics in the Micropaedia. None of these procedures is necessarily better than the others; each appeals to some individuals.

Within each article, data should be presented in logical fashion without ambiguity or oversimplification. The information selected for inclusion should be relevant to the needs of the reader. For instance, biographies should provide summaries of persons' contributions rather than focusing on dates and degrees. The treatment of such complex topics as the Middle East or nuclear energy will help indicate the quality of the encyclopedia as a whole.

Style. The hallmarks of effective encyclopedia style are simplicity and directness. Even though the subject matter of an encyclopedia is largely factual, an encyclopedia article should be a pleasure to read. The language should be appropriate to the subject and to the intended audience. Some publishers of encyclopedias for children use controlled vocabularies or test the reading level of their articles using various readability formulas in order to guarantee that children will be able to understand them. In sets for all age levels, technical and advanced terms should be defined when they first appear. Difficult topics should be introduced gradually and with sufficient explanation, so that they do not confuse or overwhelm the reader.

Bibliographies. Most encyclopedias include bibliographies of suggested readings as guides to further study. Lists of books, magazines, or other items that are grouped on the basis of difficulty are particularly useful. The works listed should be current and generally available. Bibliographies are most useful when they appear at the ends of articles

instead of being segregated in a separate volume. Teachers sometimes discourage students from using encyclopedias because they suspect that they rely too much on them when writing term papers, but the encyclopedia article provides an excellent introduction to the term-paper topic, and its bibliography will provide titles of materials for further research.

Illustrations. Drawings, maps, portraits, photographs, diagrams, and other graphics are an interesting and often instructional component of encyclopedias. Illustrations should be clear, informative, and attractive and placed in proper relation to the articles on the subjects they depict, with captions complete enough to avoid confusion. The size of illustrations should be appropriate to their subject matter; paintings, for instance, should not be reduced to the size of postage stamps. The use of color enhances the attractiveness of an encyclopedia, and encyclopedia publishers are increasingly using more color. Some sets are printed on four-color presses, which means that color can appear on any page. Some publishers still print only selected sections on a four-color press, which means the decision of where to use color is partially determined by where the article appears in the set rather than its subject. Since children are more dependent on pictures for meaning than adults, those choosing a set for them should pay special attention to illustrations.

Physical Format. First, the buyer should notice whether the encyclopedia is durably and attractively bound. Is the binding strong enough in relation to the weight of the volumes? Some encyclopedias have more than one binding available at different prices. For home use, the most inexpensive binding should be suitable. Test a volume to see whether it lies flat when opened. The centers of double-page maps and illustrations should not disappear into the binding. The paper should be opaque so that the print on one side of a page does not bleed through on the reverse. Type

should be clear and legible, and a variety of sizes and spacing should be used to avoid monotony. Encyclopedias for young children are usually set in a large typeface that is easier to read.

Special Attributes. Some encyclopedias have extra features sold as part of a package, such as reference services, separate atlases, dictionaries, or other materials, that are intended to lure hesitant buyers. Consumers should weigh very carefully the added value of such features and not let their presence distract them from assessing the encyclopedia's main objectives and quality.

A table can be found on page 47 that compares the sets on the basis of size and price. Consumers should note that the consumer prices on the chart are those suggested by the publishers. Some encyclopedias are sold by wholesalers who may set their own prices. Consumers should also be aware that when they place an order for an encyclopedia in their home, the Federal Trade Commission guarantees a three-day "cooling-off period" during which they can cancel their order.

Other Facts about Encyclopedias

All encyclopedia publishers also issue a yearbook, except for New Standard, which publishes a quarterly supplement. The New Encyclopaedia Britannica contains cross-references to its yearbook, Britannica Book of the Year/Britannica World Data. The other yearbooks, while useful sources of current information, are not related to their parent sets in arrangement. In fact, some publishers use the same yearbook to update several different sets, and others contract out the preparation of their yearbook to other encyclopedia publishers.

Encyclopedias have been published in alternate formats, such as braille, large print, and "talking book." Today some

Librarians sometimes ask if the American Library Association has a policy on the frequency with which libraries should replace their encyclopedias; ALA does not have such a policy. However, a survey by Kenneth Kister, reported in Library Journal (April 15, 1979, p.893), found that public libraries replaced their encyclopedias at least every five years. Consumers considering purchase of a used encyclopedia should buy a set that is five years old or less. An older set should be avoided, especially if it is to be used by children.

Encyclopedia Reviews

Purchasing an Encyclopedia is a revision of a 1988 publication with the same name that reviewed 10 general encyclopedias. Since that time, a new set, Children's Britannica, has been added. These 11 sets are all published in the U.S. and revised annually. The following reviews are based on those written by librarians for the October 15, 1989, issue of BOOKLIST/Reference Books Bulletin. The editions reviewed are all 1989 sets. The reviews are arranged alphabetically and stress the degree to which the sets have been updated since the previous year. For further information, most reviews carry a reference to a more extended review published in BOOKLIST/RBB.

We hope the following reviews make clear that most of these sets have distinctive qualities and that, while their coverage overlaps a great deal, unique information can be found in each. Americans are fortunate to have so many encyclopedias with complementary coverage to serve as a mainstay of the home and library reference collection.

Readers needing more information on encyclopedias should consult one of the following books, which may be available in libraries:

Kister's Concise Guide to Best Encyclopedias by Kenneth F. Kister. Oryx Press, 1988. \$15 (0-89774-404-2).

Based on the title listed below, this book offers updated reviews of 33 encyclopedias for children and adults. It also has brief notes on 187 specialized subject encyclopedias.

Best Encyclopedias: A Guide to General and Specialized Encyclopedias by Kenneth F. Kister. Oryx Press, 1986. \$39.50 (0-89774-171-4).

In addition to reviewing 10 of the 11 encyclopedias discussed here, Kister also reviews 42 other sets, some of them out of print and others in one volume. Appendixes give brief comments on specialized subject encyclopedias and foreign-language encyclopedias.

General Reference Books for Adults (Bowker Buying Guides Series). Bowker, 1988. \$69.95 (0-8352-2393-0).

Reviews nearly 300 in-print encyclopedias, dictionaries, and atlases for adults.

Reference Books for Young Readers (Bowker Buying Guide Series). Bowker, 1988. \$49.95 (0-8352-2366-3).

Evaluates encyclopedias, dictionaries, and atlases for children.

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Encyclopedia Reviews

Academic American Encyclopedia.

21v. Bernard S. Cayne, editorial director; K. Anne Ranson, editor in chief. Grolier, Inc., Sherman Turnpike, Danbury, CT 06816, 1989.

Because of its youth (it was first published in 1980) and the extensive revision program of Grolier (which acquired it in 1982), Academic American Encyclopedia devotes the most coverage to contemporary topics of the major multivolume sets.

Coverage is geared to the information needs of high school and college students and adults. AAE is, for the most part, a specific-entry encyclopedia and is particularly strong in its coverage of current events, popular culture, and biography. Most of the more than 2,300 contributors are college and university faculty members; slightly more than half of the articles are signed by contributors.

The revision program is commendable. The last four editions (1986–89) have included 482 articles on new topics, 229 replacement articles, 714 articles with substantial revisions, and almost 8,000 articles with minor changes. Reflecting the emphasis on current topics, among the 130 articles added this year are Angioplasty; Battered Women; Glasnost; Deconstruction; Bee, Killer; and New Age. Government policies on agriculture and ecological problems posed by agricultural practices are explored in the new articles Agricultural Economics and Agricultural Ecology and the revised articles Agriculture and the Food Supply and Agribusiness. Environmental concerns are addressed

with major revision to Acid Rain and Greenhouse Effect. Advances in science and medicine are explored in revisions of Genetic Engineering and Genetic Diseases, the new article Foot Disorders, and the explanation of fetal surgery in $Pregnancy\ and\ Birth.\ Developments\ in\ automation\ resulted$ in extensive revisions of Computer-Aided Design and Computer-Aided Manufacturing, Computer Crime, and Computer Languages. The extensive glossaries accompanying the articles Computer, Video, and Sound Recording and Reproduction were also updated. But traditional material also received attention, as shown by major revision of BlankVerse; Depression of the 1930s; Africa, History of; and the replacement articles Immigration, Maya, Hittites, and Mesopotamia. Important post-deadline events (Canadian and Pakistani elections and the accession of Akihito as emperor of Japan) were added.

Approximately 35 percent of all entries are biographical. Among this year's 55 additions are historical figures (Alp-Arslan), musical figures (Norman, Jessye; King, Carole), writers (Highsmith, Patricia; Hinton, S. E.), athletes (Jordan, Michael; Joyner [family]), and heads of state (Sánchez, Oscar Arias; Li Peng). The entries Cartland, Barbara; Gorbachev, Mikhail; Mitterrand, François; and Thatcher, Margaret were replaced with new articles, and Jackson, Jesse; Benedetti, Mario; Baldwin, James, and Murdoch, Rupert substantially revised.

Illustrations, which number almost 17,000 and occupy fully a third of the set, have been updated with 120 new or revised color illustrations and maps. Some examples are artwork showing the HIV virus and the development of the printing mechanisms of typewriters; thematic maps showing immigration trends and the distribution of telephones worldwide; and new photographs in entries as diverse as Akihito and Genetic Engineering (the Harvard mouse). Three-quarters of all the illustrations are in color, and AAE is one of the most attractive sets reviewed here.

Grolier has begun a five-year program to update the bibliographies that accompany more than 40 percent of the articles. More than 1.500 were revised this year, in addition to those in the extensively revised or rewritten entries. The index volume continues to provide access to all the information in the set as well as to places on maps, tables, illustrations, and bibliographies.

AAE is also available in three other formats: online, laser videodisc, and CD-ROM. Grolier is working on another optical disc product that will include illustrations and sound.

As a result of a systematic and conscientious revision program, the 1989 edition of Academic American Encyclopedia continues to be the most current encyclopedia available. While it is not as comprehensive as some of the other sets for adults reviewed here, it has many unique entries. Enhanced by excellent illustrations, it presents accurate, objective, and concise information needed by high school and college students as well as adults.

Children's Britannica.

20v. Rev. ed. Encyclopaedia Britannica, Inc., 310 S. Michigan Ave., Chicago, IL 60604, 1989.

This is the first revision of *Children's Britannica*, which was initially published in the U.S. in 1988. It is based on a set published in Britain since 1960. Although occasional similarities are found with articles in the now-defunct *Britannica Junior*, this set is new to the U.S. *CB* is intended to be international, emphasizing the English-speaking world; there is less coverage of American institutions, places, and people and more of British, Australian, Canadian, etc. It has approximately 4,200 text entries and 5,700 capsule entries in the index (final) volume. It is the smallest set of the 11 encyclopedias reviewed here. Volumes 1 to 18 are each 320 pages in length, resulting in letters being split (for

example, volume 12 covers *Micro* to *Nitric*). Volume 19 includes an atlas.

The publisher reports no significant changes in this current update. Only three articles have been added: Bush, George; Electronic Music; and Sakharov, Andrey. Of the 36 articles updated, 20 are said to be substantially changed. Almost half of these involve places, and several others are scientific topics. The article President is among those revised, but the accompanying table of U.S. presidents still lists Ronald Reagan as the current president.

Articles are brief, straightforward, and objective. There are some lengthy articles, for example, Children's Literature (18 pages); United States (18 pages); United States, History of (21 pages); and Canada (11½ pages). Most pages have at least one illustration; approximately one-half of the illustrations are in color. This set has the least number of illustrations per page of all the encyclopedias reviewed here. The photograph in the entry United States identified as Mirror Lake at Yosemite appears to actually be the Chesapeake Bay. There are no bibliographies; pronunciations are not given. Writing is not consistently gender free.

Articles are unsigned, although the preface states that articles were prepared by "leading authorities in the various subject areas." A list of several hundred advisers in the last volume includes a few prominent names and titles (for example, Ralph E. McGill, director of the Royal Ballet; Konrad Lorenz). CB appears to neglect coverage of current information. Thus, Haiti is said to have been freed from Jean Claude Duvalier in 1986, but there is no indication of what has happened since. Likewise, elections and unrest in such places as the USSR, Panama, and China are not mentioned. South Korea (Korea, South) is described as a "constitutional republic"; no additional information on politics is given.

About one-third of the 159-page atlas in volume 19 is devoted to foreign countries and has its own index. The

remainder is devoted to states and provinces of North America, with maps individually indexed. The 612-page index to the set includes capsule entries, sometimes standing alone and sometimes with page references. Entries distinguish between "main article," "major article," and "reference in"; a bullet refers the user to more relevant subject headings. Some illustrations are indexed.

CB is for a somewhat younger audience than other juvenile encyclopedias except The New Book of Knowledge. However, the reading level varies substantially among articles. The print is good sized (the largest of any of the sets reviewed here), which is helpful for young readers, but there seems to be no consistent policy of clarifying difficult and abstract concepts through the use of illustrations, analogies, etc.

The format is very ordinary, with drab-looking pages—it is not an inviting set. This is particularly noticeable in the coverage of states, which is not only brief (usually two or three pages), but lacks the color pictures, graphs, tables, state seals, etc., typical of other sets. There is usually a small "Facts and Figures" box and a photograph or two.

CB is not an impressive set, especially considering that it is a relatively new publication that could have broken new ground. But because it is generally accurate, objective, fairly modestly priced, and has a more international scope than other juvenile encyclopedias, Children's Britannica may be considered as an additional purchase in libraries serving elementary and middle school children.

Collier's Encyclopedia: With Bibliography and Index.

24v. William D. Halsey, editorial director; Bernard Johnston, editor in chief. Macmillan Educational Co., 866 Third Ave., New York, NY 10022, 1989.

Collier's Encyclopedia has undergone many transformations since its original publication in the late nineteenth R

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century. It is published by Macmillan, which also publishes *Merit Students Encyclopedia* (reviewed below) for younger readers. *Collier's* is a comprehensive encyclopedia intended for high school and college students and educated adults.

Approximately 5,000 advisers and contributors, 31 of them new this year, have contributed to the set. About 90 percent of all articles are signed, and a list of contributors appears in the front of volume 1, with position and publications. A few distinguished contributors are Russel B. Nye (English), Jacques Barzun (history), and A. L. Rowse (England).

Pronunciation keys are frequently given for entries, and within the text foreign terms are sometimes defined (for example, "the life of puszta [a slavic-derived word meaning a waste or empty area]"). There are more than 17,000 color and black-and-white photographs, four-color maps, and line drawings appropriately placed throughout the text. In the past Collier's has been criticized for its unattractive illustrations. The appealing color photographs in the entries Africa and Solar System demonstrate that the editors are remedying this problem. Added this year are 122 new photographs, most of them in color.

There are 35 new articles in this edition, among them Gilman, Charlotte Perkins; Montand, Yves; Persons and Personal Identity; and Supernova. Palestine Liberation Organization has been dropped as a separate entry and has been covered within the text of a very current and lengthy new article, Palestine, Modern. An additional 27 articles were completely rewritten, for instance, Africa: Economic Geography and Development; Jackson, Jesse; Novel; and Radiocardon Dating (replacing Radioisotope Dating). More than 1,000 entries were revised in some way. Acquired Immune Deficiency Syndrome, Artificial Intelligence, and Mulroney, Brian are a few of the updated articles.

Surprisingly, while there are the articles Black Americans; Drew, Charles; Jackson, Jesse; Jackson, Michael; and

Armstrong, Louis, there are no separate biographies for such prominent blacks as Barbara Jordan, Shirley Chisholm, or Generals Benjamin O. Davis, Sr., and Jr. Also, there is little or no coverage of prominent women like Betty Friedan or Gloria Steinem. In contrast, controversial topics like Abortion and Homosexuality receive excellent coverage. All articles are scrutinized by several scholars within a field to eliminate bias and establish balance. The set continues to include excellent how-to sections (for example, Household Appliances, House Plants). These articles are designed for the layperson and sometimes include glossaries of terms or suggestions for further reading.

The article Career Guidance is in serious need of revision. The bulk of the article consists of tables outlining 117 occupations. Information in the tables was extracted from the Occupational Outlook Handbook, but many discrepancies indicate that an old edition was used. For example, under lawyers Collier's says the beginning salary is \$18,000, while the 1988–89 OOH says \$31,000.

Collier's favors broad-area coverage and does not make extensive use of see also references; this approach mandates use of the index. For example, a person seeking information on the Iran-Iraq War by looking under the entries Iran and Iraq will find very little information on the war and no references to related articles. Using the index, the reader quickly determines that material is included in the articles Persian Gulf War and Middle East. The excellent index in volume 24 indexes text, maps, illustrations, and sections in the bibliography.

Along with the index in the last volume is a 200-page bibliography with nearly 12,500 titles. The editors state that it has not been updated since the previous edition, though in the previous four years more than half of the titles were changed. The bibliography is arranged by broad subject (for example, philosophy, religion, history) and proceeds from the general to the more specific field. A

one-page "Subject Guide" directs users to the appropriate page. Readers will need to use the index to find specific topics in the bibliography. For example, lists are provided in the history section for all time periods and regions, but while books on blacks or slavery are included, they are difficult to find since they are not separated into their own sections. There are no references from articles in the set to the bibliographies. In recent years *Collier's* has been adding bibliographies to the ends of selected new and revised articles. However, no bibliographies were added to articles this year.

Collier's is a well-designed and -written set that serves its intended audience well. The material is relatively current, and many subjects are discussed at length. As with other encyclopedias of this size, some problems in coverage have been uncovered. Collier's Encyclopedia will prove useful in high school, academic, and public libraries and in the home for older teens and adults.

Compton's Encyclopedia and Fact-Index.

26v. Dale Good, editor. Compton's Learning Co., div. of Encyclopaedia Britannica, 310 S. Michigan Ave., Chicago, IL 60604, 1989.

Compton's Encyclopedia and Fact-Index, first published in 1922, emphasizes practical and curriculum-related information and is designed for use by students in the upper elementary grades through high school.

Publication of the 1989 edition completes an extensive revision process begun in 1983. This year 23 percent of the text articles have been reworked. Most of the revision occurred in the $P,\,Q,\,R,\,S,\,U,$ and V volumes and includes 430 new articles, 500 rewritten or extensively revised articles, 300 updated articles, and 160 new "Fact-Index" capsules. The 1989 edition also includes 1,892 new illustrations and 86 new maps. Many other illustrations and

maps were revised. Approximately 120 bibliographies were added or revised.

The editorial consultants and contributors, with their credentials and the titles of their articles, are listed at the beginning of the first volume. Most *Compton's* articles are not signed; however, each article that is signed includes a small box identifying the contributor and his or her credentials.

Compton's is well known for its "Fact-Index," which is found at the end of each volume and serves as an index to that volume and to related articles in other volumes. The last volume is a compilation of all "Fact-Indexes." Of the 63,503 entries in the "Fact-Index," 26,023 are capsule articles, concise entries for topics not covered in the main text. Special features in Compton's are the two-page outlines, "Here and There," at the beginning of each volume and the illustrated, curiosity-raising "Exploring" questions, also found at the beginning of each volume. The fact summaries for the geographic articles have been improved.

The articles range in length from one-fourth page for simple topics to many pages for broader or more important subjects. The language is appropriate for young people, without using a controlled vocabulary. Although *Compton's* is written for American young people, it has worldwide coverage, especially of geographic and biographical topics.

In addition to many geographic articles, Paper, Planets, Soap, Snake, and Vocation are among the noticeably revised articles this year. These include more current and more color photographs, more up-to-date statistics and bibliographies, nonsexist language, metric equivalents, and especially good graphics. Seal, Sea Lion, and Walrus includes a discussion of the controversy about hunting seals. Reptile has been rewritten, is more attractive with its color photographs, and doesn't concentrate on dinosaurs as much as the previous article. Spider, also rewritten, includes a color anatomical drawing as well as several impressive color photographs. At

last, Rainbow is appropriately illustrated. The attractive, rewritten Roads and Streets still gives their history but places more emphasis on their design and construction. Santa Claus begins, "The legend of jolly old Santa Claus, or Saint Nick, began with a real person: Saint Nicholas, who lived many years ago," an improvement over the previous article that began, "In a snowy house at the North Pole lives a merry old gentleman with curling white whiskers and twinkling eyes."

New articles this year include Pregnancy and Birth, Sexually Transmitted Disease, Science Fiction, Stonehenge, Vegetables, Plate Tectonics, Photocopying, Shopping Center, Unidentified Flying Object, and Suicide. The new article Stock Market replaces Stocks and Bonds and concludes by discussing the crash of 1987.

Especially noteworthy are the changes in *U.S.S.R.*, which is no longer listed under *Russia*. It has a contemporary, unbiased tone; contains many beautiful color photographs and statistics updated through 1987; and cites books as recent as 1988 in its bibliography.

Compton's has improved in its coverage of controversial topics of high interest to young people, but some topics still need improvement. Although cocaine and crack are mentioned in Drugs, the entry Crack in the "Fact-Index" doesn't refer to Drugs. Interestingly, Roe v. Wade is not mentioned in Abortion, though it is listed in the "Fact-Index," included in a list of landmark court rulings under Supreme Court, and discussed in Crime.

Bibliographies are provided for only the longest articles and cite many up-to-date titles appropriate for young people; however, some bibliographies need improvement. Many current topics such as HDTV, superconductivity, and the 1988 INF treaties are mentioned in the context of other articles. Oliver North and Richard Thornburgh are mentioned in the "Fact-Index."

Encyclopaedia Britannica, Inc., has recently released *Compton's MultiMedia Encyclopedia*, a version of the set on CD-ROM enhanced with many special features like sound, color, and animation.

Compton's thorough revision is commendable, and it is now generally reliable and current. It is recommended for home, school, and library use.

The Encyclopedia Americana.

30v. Bernard S. Cayne, editorial director; David T. Holland, editor in chief. Grolier, Inc., Sherman Turnpike, Danbury, CT 06816, 1989.

During its 160 years of publishing history, *The Encyclopedia Americana* has established a solid reputation. It is second only to *The New Encyclopaedia Britannica* in size and is published by Grolier, which also produces *Academic American Encyclopedia*.

The 1989 Americana includes 47 new articles. A number of them pertain to science and medicine, for example, Bionics, Biotechnology, Hyperventilation, Lyme Disease, and Vaginitis. Increased emphasis on Africa is reflected in the new article African National Congress and in biographical entries on four African political figures: P. W. Botha of South Africa, Robert Mugabe of Zimbabwe, and freedom leaders Nelson Mandela and Stephen Biko. Prominent individuals involved in the 1988 U.S. presidential campaign, including Lloyd Bentsen, Michael Dukakis, and Albert Gore, have also been added. Among the six sports figures covered for the first time are Ivan Lendl, Magic Johnson, and John Wooden. Toni Morrison, winner of the 1987 Pulitzer Prize for fiction, has been added to this edition.

In addition, 89 completely rewritten articles replace earlier entries. Notable among these are *Central America* and those treating each of its component countries except Costa Rica, which received minor revisions. For the most part, these replacement articles present timely coverage of political events in this region. For example, Nicaragua mentions the Contras and the Arias Plan of 1987. Incredibly, however, the new article Panama concludes with the death of Torrijos in 1981; therefore, it contains no information on General Manuel Noriega or on recent U.S. foreign policy toward Panama. (Although Noriega is mentioned in Reagan, Ronald, his name is not indexed.) Recent technological developments are reflected in the replacement articles for Calculator and Superconductivity, while medical advancements are evident in articles on such topics as Muscular Dystrophy, Hypertension, and Toxic Shock Syndrome. The article Gorbachev, Mikhail has been considerably expanded, and a four-item bibliography has been added.

Thirty-three other articles have undergone major revision since the 1988 edition. For example, *Drug Addiction and Abuse* has been expanded to include information on crack, designer drugs, testing for drug use, and drug users and AIDS. Unfortunately, however, the bibliography has been reduced from 10 sources to three, none of which is likely to be in a high school or small public library. Among other articles on vital public concerns that were revised to reflect recent information are *AIDS*, *Birth Control*, and *Strategic Defense Initiative*.

An additional 509 articles received minor revisions reflecting events of the past few years. Bibliographies accompanying rewritten and revised articles were updated, as were bibliographies for 628 other articles. Of the bibliographies analyzed, virtually all include sources from the 1980s, and two even cite 1989 publications.

Both the replacement and revised articles reflect *Americana*'s commitment to updating illustrations and using more color photographs. Of the 212 new photographs in the 1989 edition, 114 are in color. These make a striking improvement in such articles as *Alaska*, *Europe*, *South*

America, and Spain. In some respects, Americana is remarkably current. Among 1988 events covered are the beginning of the withdrawal of Soviet troops from Afghanistan in May, the Iran-Iraq ceasefire in August, and the successful flight of the space shuttle Discovery in September and October. On the other hand, the editors have allowed other articles to become out of date. An example is Air Transportation, which is reprinted exactly as it was in the 1971 edition and therefore contains no mention of the 1978 Airline Deregulation Act or the dissolution of the Civil Aeronautics Board in 1984. Both this article and a separate entry on the CAB discuss the board as though it were still in existence. Another example occurs in Georgia, which indicates that a governor cannot serve two consecutive terms. This has not been the case for more than a decade. and the table of governors accompanying the article shows that both the current and preceding governors have been elected to two terms. Other articles have not kept pace with new technologies. Sound Recording and Reproduction does not acknowledge the existence of compact discs, and Television includes no information on high-definition television. The treatment of cable television and satellite broadcasting is also outdated. In addition, coverage of contemporary writers tends to be skimpy. Among significant authors overlooked are Peter Taylor, Alan Ayckbourn, Seamus Heaney, Dario Fo, and Claude Simon.

Since cross-references within and at the end of entries are not used extensively, the user of *Americana* must rely on the index (volume 30) for accurate access to the set. Fortunately, the index is quite detailed and provides references to illustrations, maps, and glossaries. However, it proved to be inconsistent in indexing the information provided in charts. For example, the index entry for the space shuttle *Discovery* refers to a table of space achievements in the *Space Exploration* article. On the other hand, neither Attorney General Richard Thornburgh nor his predecessor, Edwin Meese,

appear in the index, although both are listed in the chart accompanying the *Attorney General* article.

Americana continues to list the 6,512 contributors; their professional affiliations appear at the front of volume 1.

In general, the articles in *The Encyclopedia Americana* are authoritative, objective, and well written. Although in most respects *Americana* admirably achieves its goal to "serve as a bridge between the worlds of the specialist and the general reader," its lack of currency in certain areas is a concern. As one of the most comprehensive general encyclopedias, the set is most appropriate for high school and college students and adults.

Funk & Wagnalls New Encyclopedia.

29v. Leon L. Bram, editorial director; Norma H. Dickey, editor in chief. Funk & Wagnalls, Inc., 70 Hilltop Rd., Ramsey, NJ 07446, 1989.

Funk & Wagnalls has been publishing encyclopedias since 1912. Designed for use by "junior and senior high school students and the general, non-specialist adult population," this set is unique in that it is designed to be sold in supermarkets in the U.S. and Canada in "book-a-week" programs; schools and libraries can purchase it directly from the publisher.

The volumes are normal book size (about 9 by 6 inches) and sturdy enough for home use. The spine lettering can be confusing, however, for in 10 cases the same five letters end one volume and begin the next (for example, Color both ends volume 6 and begins volume 7, the actual last entry being Color and the first, Colorado). Articles are generally well set off and clear. Illustrations are well reproduced but are sometimes bled to the edges or into the gutters, and some maps that cross two pages lose detail in the gutters.

The bibliographies (1,255 numbered lists by subject followed by 339 biographical lists) are all gathered together at the back of volume 28. While they are preceded by a brief guide, the main access is by references at the end of more than 3,000 articles. The majority of subject bibliographies contain 5–10 titles; biographical lists contain 1–6 items. All include one-sentence annotations. Many 1987 and 1988 titles were noted.

Entries range from brief identifications of just a few lines (Nipigon, Lake; Nishapur; Eviction) to many pages, the longest being United States (107 pages). The majority are less than a page. Similar topics are handled in similar fashion: for example, all states and provinces include a colorful two-page graphic statistical spread and an indexed map. All countries follow a similar pattern. While some 900 contributors are identified and some entries show the initials of their writers, the majority of articles are not signed.

In the past year almost 3,000 pages have been revised, with almost 1,500 articles updated and 113 new articles added. New entries reflect both newly important subjects and the strengthening of older subjects. Science has been an ongoing major thrust, and new entries include Calcination, Diethylstilbestrol, Gamma-Ray Astronomy, Guillaine Barré Syndrome, Kaposi's Sarcoma, Kirlian Photography, and Ozone Layer. Articles have been updated to include political events (the withdrawal of Russian troops from Afghanistan, unrest in Armenia, the reelection of Mitterrand in France), and new research or records (Soaring and Gliding mentions the new altitude record of 14,938 m. [49,009 ft.] set in 1986; Astronomy mentions the 1986 sighting "for the first time in history, the birth of a star, in the constellation Ophiuchus, 500 light-years away").

Four new black-and-white illustrations for *Gymnastics* show two Russian and two American gymnasts at the Seoul Olympics. The *Olympic Games* entry itself now is illustrated with a color photograph of the 1988 opening ceremonies at

Seoul and a listing of the medals won by competing nations in those games.

While brief mention is made in United States of America of the Iran-Contra Scandal ("a congressional investigation into the U.S. sale of arms to Iran and the diversion of profits from the sale to support the Nicaraguan rebels"), there is no specific mention of Oliver North. Mention of the end of the Iran-Iraq War is made under both countries. China is updated to the new presidency of Li Xiannian in April 1988, but there is no mention of Li Peng as premier. Korea includes the election of Roh Tae Woo as president in December 1987 and also that opposition parties captured a majority of the National Assembly the following April. Space Exploration is updated both textually and in pictures, and the chart "Milestones in Manned Space Flight" is updated through the successful September 1988 U.S. mission. Other charts are also updated. For example, Golf, Nobel Prizes, and Pulitzer Prizes all now include 1988 winners. Baseball and Academy Awards end with 1987.

Looking for items not found in last year's edition, surrogate motherhood is discussed under *Parent and Child*, and the experimental aircraft *Voyager*, which made the first nonstop round-the-world flight in 1986, is detailed in *Aviation*, although it cannot be found through the index. The October 1987 stock market crash is mentioned in the *United States* entry.

Funk & Wagnalls New Encyclopedia provides broad coverage of the world in a readable, balanced, and accurate way. While it is not as scholarly and comprehensive as the major multivolume adult sets nor as attractive as many other encyclopedias, it provides straightforward, up-to-date information for its intended audience of students and nonspecialist adults. It provides good value for the money and can be a practical purchase for libraries and the home.

Merit Students Encyclopedia.

20v. William D. Halsey, editorial director; Bernard Johnston, editor in chief. Macmillan Educational Co., 866 Third Ave., New York, NY 10022, 1989.

NOTE: This set is not currently being sold to consumers, though it is still available to schools and libraries.

Designed for students in grade 5 and up, *Merit Students Encyclopedia* is meant "to meet the educational and informational demands brought about by the changes that have taken place in our society and our schools since the advent of the space age." The entries feature curricular topics as well as practical information, like the four-page article *Chess* or the three-page entry *Canning*, both of which give directions.

Unlike most other sets for young people, letters are split between volumes (for example, volume 6 covers *Dijon* to *Fermium*). The index is in the second half of volume 20; index entries refer to illustrations and maps as well as text. Cross-references are plentiful in the index and within many articles. For example, *Common Market* directs the user to the more current *EEC*. While *solid waste* doesn't appear in the index, six paragraphs are devoted to it in *Environmental Pollution*.

Merit Students entries range in size from just a few lines to more than 30 pages (United States, History of). There are about 20,000 illustrations, including photographs, charts, drawings, paintings, and 1,350 maps. About one-quarter of the illustrations are in color. While the number of illustrations compares favorably with other sets for young people, the percentage in color is low, detracting from the appearance of the set. Nine articles have new pictures this year, including Olympics, Basketball, and Automotive Industry, for a total of 18 new illustrations, none of them four-color. While Basketball now contains one photograph of a women's game and Olympics has two pictures of women

participants, some of *Merit*'s outdated photographs still show sexual or racial stereotypes.

A complete list of authors and the editorial board is found in volume 20; most articles are signed. This edition has 31 new contributors, including poet James Merrill writing on Howard Moss.

There are 40 new articles in the 1989 edition, more than half of them biographies. New entries include Babbitt, Bruce; Bentsen, Lloyd; Dukakis, Michael; Goodall, Jane; Morrison, Toni; and Veteran's Affairs, (U.S. Department of). Thirteen articles were completely rewritten (Jackson, Jesse; Pterosaur), and 411 others were revised. Revisions to such articles as Basketball; Chad; Fugard, Athol; and Space Flight were minor. On the other hand, Asbestos, Leonids, Armenian SSR, Jordan, and Pakistan have major changes that reflect 1988 events and concerns (Bhutto's election and Hussein's severance of ties between Jordan and the West Bank). Headings have been enlarged, and clearer type is used in the index.

A helpful feature following some entries is bibliographies. Long bibliographies are divided into separate lists of books for younger readers and those for advanced students. Unfortunately, these lists are sometimes dated. All 12 titles under *New York* are 1979 and earlier; the most recent title under *Truman*, *Harry* S. is 1972.

Merit Students has readable biographical information. Highlighted at the beginning of these articles are birth and death dates, nationality, and major contribution. Entries exist for some individuals not included separately in other children's sets, such as Louis Adamic. Literature is treated in some unique ways. Entries are given for such novels as Les Misérables, The Great God Brown, Oliver Twist, and Black Boy, among many others. These provide a brief summary of plot and/or theme as well as pointing out the lasting value or effect of the work. Merit is the only set designed for young readers that has plot summaries. Biog-

raphies of poets include excerpts from poems, giving a flavor of their work.

Controversial topics continue to be treated in "an honest and reasonable manner." Abortion, Acid Rain, AIDS, and Sex Education present various points of view. But more revision and updating is needed throughout, especially on topics of interest to junior and senior high students. Drug testing, car telephones, and surrogate motherhood aren't listed at all. Many popular athletes are not covered. Japanese Americans are mentioned only under Concentration Camps, omitting legal decisions of the 1980s. The article on American blacks is under Negro, and the prominent blacks mentioned date to the 1960s. (The word Negro is used many places in the set.)

Still, there is much useful, well-organized, accessible information in *Merit Students Encyclopedia*. It is not a "first purchase" but is worthwhile considering as a supplemental addition for young people's collections.

The New Book of Knowledge.

21v. Bernard S. Cayne, editorial director; Jean E. Reynolds, editor in chief. Grolier, Inc., Sherman Turnpike, Danbury, CT 06816, 1989.

The Book of Knowledge was a topically arranged encyclopedia published from 1910 until 1965. In 1966 Grolier introduced The New Book of Knowledge, which is alphabetically arranged. The editorial goal is to correlate information to the elementary school curriculum while keeping in mind the interests of the contemporary child; in other words, to provide children with factual information while meeting their out-of-school recreational needs. Each article in NBK is tested with the Dale-Chall readability formula to ensure that the contents correspond to interest and grade levels at which each subject is typically introduced to the

child. Articles on controversial topics continue to be fair and balanced.

Many experts have contributed to this edition of NBK. Most recognizable are Peter Ueberroth, retired commissioner of baseball (Baseball), and Albert Shanker, president of the American Federation of Teachers (Teachers and Teaching). All articles that are a page or more, and many shorter articles, are signed by their authors. A list of contributors, consultants, and reviewers appears in volume 20.

Information may appear as text articles or as "Dictionary Index" entries. Each volume in *NBK* has an index that also includes brief entries called "Dictionary Index" entries for topics not in the text. Volume 21 cumulates the volume indexes but does not contain the "Dictionary Index" entries. The index notes pronunciation as well as indexing illustrations.

Articles in the main part of the set range from one-half to 22 pages. Among the 31 new subjects added to the 1989 edition are Airports; Aquino, Corazon; Hydraulic and Pneumatic Systems; Jackson, Jesse; Pandas; Sound Recording; Telecommunications; Terrorism; Ticks; Tongue Twisters; Trust Funds; and Twins. There are 29 replacement articles; among these are Aviation, Baseball, Book Reports and Reviews, Teeth, Tennis, and Tests and Test Taking. This year articles on 20 countries were either revised or replaced. For instance, the 22-page Japan is completely revised and reillustrated. Coverage is also expanded by the addition of separate articles on the art and architecture as well as the language and literature of Japan. This expansion offers insights into the life-styles of the Japanese people rather than just retelling facts and figures about the country. Of the 132 "Dictionary Index" articles new to the set, 94 are biographies. NBK is published later in the year than many of the sets reviewed here, so the editors were able to add biographies of President Bush's appointments to his cabinet and the death of Japan's emperor Hirohito. An article that still needs updating is *Hi-Fi and Stereo*, which doesn't mention compact discs (though the new entry *Sound Recording* discusses this technology). A measure of updating is that 1,145 of the 10,000 pages in the 1989 *NBK* have been replaced or corrected.

Approximately one-third of *NBK* pages are taken up by illustrations. About 95 percent of these 23,000 illustrations are in color. Altogether, there are 1,004 new illustrations this year, including 675 color photographs, 48 black-and-white photographs, and 281 drawings. A few illustrations are outdated (for example, *Girl Scouts* shows uniforms that are no longer used), but in general the set is attractively illustrated. *NBK* is set in a large typeface that is easy for young children to read, and illustrations have good color tone and are distinct.

Throughout the text, "wonder questions" that children often ask are highlighted in boxes with explanations. Additions to the 1989 edition include "How can you tell how close a thunderstorm is to you?" "Why do people cry when chopping onions?" and "Why doesn't a satellite fall from the sky?"

Home and School Reading and Study Guides is a paper-back supplement to NBK. Part 1, "The Reading Guide," is a selected bibliography; there are no bibliographies appended to articles in the set. Arranged in alphabetical order of subjects that correspond to the set, the grade level of each title is noted. Part 2, "The Study Guide," is written for parents to suggest ways they can help with their child's learning.

The New Book of Knowledge successfully meets the information needs of elementary and lower middle school children. The set can also be used successfully by parents with younger children as well as benefit older children with reading and learning problems. It is a good purchase for

elementary, middle school, and public libraries and is also recommended for home use.

The New Encyclopaedia Britannica.

32 v. 15 th ed. Philip W. Goetz, editor in chief. Encyclopaedia Britannica, Inc., 310 S. Michigan Ave., Chicago, IL 60604, 1989.

The world's oldest and largest English-language encyclopedia, The New Encyclopaedia Britannica continues to provide outstanding scholarship and balanced coverage of world learning. Published in America since 1901, the fifteenth edition was first published in 1974 with a controversial three-part self-indexing arrangement. In 1985, an index was added, and information in the encyclopedia became more accessible. The set's more than 4,000 contributors are from distinguished universities in many countries; 22 new contributors have been added this year. Britannica contains about 26,000 illustrations, three-quarters of which are black and white.

The 1989 Britannica consists of 32 volumes: the 12-volume Micropaedia (concise articles), the 17-volume Macropaedia (lengthy articles), the one-volume Propaedia, and the two-volume index. The Propaedia serves as a topical guide to the subjects covered in Britannica. It helps readers to identify coverage of broad topics, such as political theory, sculpture, or Europe since 1920, within Britannica by listing relevant Macropaedia and Micropaedia entries. Also placed here are the transparent plates of human gross anatomy, rather than being more logically located with the Micropaedia article Human Body.

The Micropaedia includes 64,952 articles, averaging just under 300 words in length. Only 1,500 articles have bibliographies, and about 1,300 are signed. The illustrations are predominantly small, high-quality photographs plus occasional line drawings and maps. More than 100 new

illustrations were added to the *Micropaedia* this year. All 680 subjects represented in the *Macropaedia* also have much briefer entries in the *Micropaedia* (for example, *Chicago* is covered in eight pages in the *Macropaedia* and about one-half page in the *Micropaedia*). This enables the *Micropaedia* to be used as a complete stand-alone encyclopedia but also leads to duplication.

About 3 percent of the articles in the Micropaedia reflect revision this year. New articles total 222 (another 1,940 Micropaedia entries have been either rewritten or revised) and include Amniocentesis, Creationism, Dyslexia, Iran-Contra Affair, Sara Lee Corporation, Supercomputer, and Voyager. More than 70 of the new entries are biographies. Britannica continues to have substantially more biographical entries than its competitors; Arnold and Jacobus Houbraken, Beryl Markham, and Frederick Pottle are people not found in any of the other sets reviewed here. Britannica's coverage of Americans and foreigners is more balanced than in other sets. The biographies of Ronald Reagan and Margaret Thatcher, for instance, are about the same length. On the other hand, such figures from contemporary American popular culture as Magic Johnson and Louis L'Amour, found in other encyclopedias, are not in Britannica.

The 680 Macropaedia articles average 25 pages but range from 2 to more than 300 pages. They are all signed and have extensive bibliographies of scholarly materials, sometimes in foreign languages. These comprehensive articles treat such broad subjects as the history of Western architecture and include biographies of 100 people who have had a major impact on civilization. The authority of Britannica's contributors is highlighted in these articles. However, some of these entries will be comprehensible only to the specialist. The article Analysis (in Mathematics), for instance, covers topics like differential equations and Fourier analysis in more than 100 pages. This article will not

serve as an introduction for the student studying these topics but rather as a summary for the professional. Illustrations are sparse in the Macropaedia, with color treatment saved almost exclusively for art, geography, fauna, and flora. This year 375 new illustrations were added.

No new articles have been added to the Macropaedia in 1989. There are 13 rewritten entries, such as Atoms, International Relations, Twentieth Century, and Slavery, and 63 that were significantly revised, like Afghanistan, Blood, and Christianity. Some of the bibliographies are in need of revision. The titles listed for human reproduction in Reproduction and Reproductive Systems, for instance, date mostly from the 1960s with nothing more recent than 1971.

The index provides excellent access to the entire set. Illustrations seem to be indexed inconsistently. However, the overall linkage between all volumes via cross-references, the Propaedia outlines, and the index entries is impressively strong.

Britannica World Data, a critical component of the encyclopedia, has been bound with the Britannica Book of the Year since 1985 and is given to first-time purchasers. Emphasis is placed upon the events of the previous year (in this case 1988) and statistics for the nations of the world. Without this volume, the set loses much of its currency, since articles within the body of the set are not updated annually with statistics and other current information. Only through this volume can readers address current topics like Noriega's indictment for drug trafficking or the U.S.-Canada freetrade agreement. Britannica is the only encyclopedia where owners of the current set will still need to use the yearbook for contemporary information.

While Britannica's annual revisions are dwarfed by its vast accumulation of knowledge, it remains an undeniable authority and a comprehensive reference tool. Its real strength is its historical treatment of topics. Its unique

arrangement does not make it the first place to turn for a quick look-up, especially on a topic of contemporary interest. Many high school, public, and academic libraries will benefit from the purchase of this distinguished encyclopedia. It will be useful in the home for adults, college students, and serious readers of high school age.

New Standard Encyclopedia.

20 v. Douglas W. Downey, editor. Standard Educational Corp., 200 W. Monroe, Chicago, IL 60606, 1989.

New Standard Encyclopedia was first published in 1910. This year the set was expanded from 17 to 20 volumes; for the first time it has a separate index (volume 20). Previous editions depended on an elaborate cross-reference structure to take the place of an index.

Articles are written by the staff of the encyclopedia and are, therefore, unsigned. The work of this staff is reviewed by anthenticators, people considered experts in the field in question. A list of the authenticators can be found in volume 1. Among the approximately 700 listed are Neil Armstrong (Space Exploration), J. Edgar Hoover (Fingerprint Identification), and Frederick Pohl (Science Fiction).

Depending on the needs of the user, New Standard may provide sufficient detail for the school assignments of middle school students or for the everyday informational needs of adults. The writing is clear and concise, employing a vocabulary that should be accessible to most junior and senior high school students. Pronunciation is included for some terms, and, in entries where scientific or technical terms are used, a glossary is sometimes provided.

Entries vary in length from one or two paragraphs for simple topics to 50 or more pages for complex ones; most entries are less than a page. Entries on similar topics such as the U.S. states, Canadian provinces, or U.S. presidents follow the same format. With a few exceptions, each letter of the alphabet has its own volume. If a letter requires two volumes, as is the case with A, C, and S, the pagination continues consecutively in the second volume. If more than one letter occupies a volume, as is true in volume 19 (WXYZ), then each letter begins a new series of numbers.

As already noted, this edition provides a separate index to the set, amplifying the self-indexing of earlier editions. The presence of illustrations, maps, tables, or glossaries is noted after main entries without specific page numbers. Illustrations are not separately indexed, however. Even though a separate index volume has been added, the elaborate cross-referencing structure of the past has been retained. While these references are helpful, they take up a lot of room that might be better spent on expanding articles.

Of the approximately 10,600 pages of text in *New Standard*, 2,669 pages (or 26 percent) were revised this year. For this edition, 96 new articles were added, 26 major articles were extensively revised, and 32 articles were rewritten. In addition, 1,348 articles and 190 bibliographies were updated. Of the 427 new illustrations added, 288 are in full color. One hundred twenty-two pieces of artwork were revised. About one-quarter of the illustrations in the set are four-color.

New articles this year include Bar Code, Chromatography, Greenpeace International, Lyme Disease, Particle Accelerator, and Strategic Defense Initiative. More than 40 biographies have been added, among them Berry, Chuck; Cosby, Bill; Hess, Rudolf; Piaget, Jean; and Te Kanawa, Kiri. Among the rewritten entries are Big Bang Theory, Dog, Family, and Radar. With the rewriting of Kentucky and Pennsylvania, New Standard has completed a long-term project to revamp articles on states and provinces. Major revisions were made to such articles as Airplane, Juvenile Delinquency, Gardening and Landscaping, Photography, Poland, and Superconductivity. Some entries

were renamed and therefore moved to another place in the set, for example, *Peking* to *Beijing* and *Handicapped* to *Disabled Persons*. The entries *Poland*, *France*, and *Haiti* are current through events of early 1988.

New Standard Encyclopedia is especially good at introductory coverage of technical topics. Airplane, Missiles and Rockets, Iron and Steel, and Type are all well written and well illustrated. However, controversial topics such as AIDS, Abortion, and Marijuana are given cursory treatment. One other area of weakness is the set's coverage of black Americans. Though there is an entry devoted to this topic, it is better at covering past events than current ones. And while there are many biographical entries for black Americans, these also emphasize historical figures. The most recent author, for instance, is Amiri Baraka (listed as Jones, LeRoi).

Bibliographies are provided for longer entries. These are usually divided into two categories: general works and books for younger readers. The majority of the titles cited in both categories were published in the 1980s.

The approximately 12,000 illustrations in New Standard are for the most part well chosen and appropriate. Most of the diagrams and tables are clear and understandable (for example, the diagrams in Air Conditioning and Printing). Occasionally photographs or drawings appear dated and could be replaced.

The Board has previously called New Standard Encyclopedia "a reliable source of current, concise treatments of a broad range of topics." The addition of a separate index volume this year makes these topics even more accessible. While it is one of the smaller sets reviewed here and thus is more limited to the provision of factual information, it is a good resource for home or library use by its intended audience of middle and high school students and adults.

The World Book Encyclopedia.

22v. William H. Nault, publisher; Robert O. Zeleny, editor in chief; A. Richard Harmet, executive editor. World Book, Inc., Merchandise Mart Plaza, Chicago, IL 60654, 1989.

First published in 1917, The World Book Encyclopedia introduced a fresh look with last year's revision (the most extensive since 1960), with a specially designed typeface (World Book Modern), ragged-right margins, and a greater emphasis on color illustration.

In accessibility and readability, World Book has traditionally excelled in meeting the reference and study needs of upper elementary through secondary school students, but its broad and balanced coverage of all major topics, not just those in school curricula, means it also serves well as a encyclopedia for everyday reference use by adults.

This year's World Book includes 289 new contributors in the list of more than 3,000 specialists providing signed articles or acting as reviewers. The list appears at the beginning of volume 1 and includes such well-known authorities as Isaac Asimov (Science Fiction, scientists' biographies), Henry Steele Commager (Polk, James K.), and Sir Edmund Hillary (Mount Everest, Mountain Climbing).

Each volume covers a separate letter or several letters of the alphabet except *C* and *S*, which are subdivided. *World Book*'s index in volume 22 has long been one of its major strengths. Index entries provide detailed access to the articles, including illustrations, maps, and overlays, as well as to the 200 "Reading and Study Guides," bibliographies appearing within the index volume itself.

Articles are written at the most appropriate vocabulary level for the anticipated readership and, thus, vary in length and difficulty. Longer articles progress from simpler concepts and reading level to the more complex; examples of this treatment are the *Fish* and *Computer* articles. Technical words and phrases, italicized, are defined as they appear.

Many articles include brief glossaries or provide pronunciation for proper names. Traditionally strong among encyclopedias in providing useful finding aids, World Book enhances longer articles with numerous cross-references, lists of related articles, outlines, and study questions. In addition, more than 1,600 bibliographies, divided by reading level, appear in articles throughout the set; 400 of them have been updated this year.

This edition of World Book contains 165 new articles. Examples of new topics covered in politics and government are Bentsen, Lloyd; Greenspan, Alan; and Li Peng; in sports and entertainment, Cosby, Bill; Johnson, Magic; and Te Kanawa, Dame Kiri; in literature, Angelou, Maya and Francis, Dick; organizations such as American Kennel Club and Gamblers Anonymous; medical subjects such as Gene Mapping, Lyme Disease, and Oncology; and such miscellaneous topics as Compact Disc, Evangelicalism, Pit Bull, Shiites, Video Camera, and Windsurfing.

In addition, 394 articles were completely revised, and 2,440 articles were partially revised. Altogether, more than 5,000 pages of the total 14,000 text pages were revised. General updating incorporates coverage of the major news events of 1988. In politics and government, Li Peng's rise as premier of China, Mitterrand's reelection in France, and Anthony Kennedy's appointment to the Supreme Court are noted. In current affairs, the ethnic clashes in Armenia and Israel, the shooting down of an Iranian airliner, the withdrawal of Soviet troops from Afghanistan, and the end of the Iran-Iraq War are also covered. Canadian Prime Minister Mulroney's reelection is likewise included, but the awarding of the multibillion dollar superconducting super collider contract to Texas two weeks earlier is not. While the Reagan article treats the Iran-Contra Scandal, there is no mention there or elsewhere of Oliver North. Sports events updated include the disqualification of Ben Johnson from

the Olympic Games for drug use and Wayne Gretzky's trade to the Los Angeles Kings.

Statistical updating is a special strength of World Book, with sources and dates usually provided. The Forest Products article, for example, has been revised to show 1987 figures from Standard & Poor's. Last year's edition introduced a dramatic increase in the use of color. Of the 29,000 illustrations (representing about one-third of World Book's space), 24,000 are in color. They are usually bright, dynamic, and well chosen, and descriptive captions explain the illustrations' context. Some 580 illustrations are new or revised this year, including action photos of the 1988 Olympics and a special color foldout in Space Travel, commemorating the twentieth anniversary of the Apollo 11 moon landing. Specially created diagrams are used to conceptualize complex topics and processes, such as Electric Power, Fallout, and Weather. Historical time lines appear in the articles American Literature, Science, and World, History of the, for example.

Of World Book's 2,300 maps, some of which were prepared by Rand McNally, almost 100 are new or revised this year. An error was noted in the Nevada political map indicating a nuclear-weapon test site for the Atomic Energy Commission, a government agency since replaced by the Department of Energy.

World Book has recently also become available on compact disc as *The Information Finder from World Book*. This version includes the whole text of the encyclopedia but not the illustrations.

World Book has traditionally enjoyed the Board's praise for its value as a general encyclopedia for school, library, and home use. Attractively illustrated, it is also exceptionally well organized, intelligible to most readers, and easy to use. The current edition maintains World Book's reputation for the high standards of readability, authority, and currency established by previous editions.

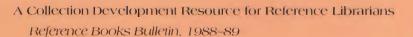
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Academic American Encyclopedia 21v.	28,780	9,792	16,800	\$800	\$660	Same as 1989
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Compton's Encyclopedia and Fact-Index 26v.	5,200 + 26,023 Fact- Index entries	11,222	22,513	\$699	\$539	\$499
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Merit Students Encyclo- pedia 20v.	21,000	12,300	20,000	Not availabe to consumers	\$579	Not available at this date
The New Book of Knowledge 21v.	4,350+ 4,650 Dictionary Index entries	10,572	23,000	\$750	\$625	Same as 1989
The New Encyclopaedia 64,952 in Britannica 32v. <i>Micropae</i> 680 in <i>Ma</i>	64,952 in Micropaedia. 680 in Macropaedia	32,201	23,082	\$1,499	\$1,069	\$1,089
New Standard Encyclopedia 20v.	17,369	10,680	12,000	\$849.50	\$499.50	Not available at this date
The World Book Encyclopedia 22v.	25,600	14,052	29,000	\$579—\$799 (depending on choice of binding)	\$549	Same as 1989

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